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(21) International Application Number: PCT/EP95/04575 (22) International Filing Date: 21 November 1995 (21.11.95) (30) Priority Data: 94402668.1 22 November 1994 (22.11.94) EP (34) Countries for which the regional or international application was filed: GB et al. (71) Applicant (for all designated States except US): ASSOCIATION FRANÇAISE CONTRE LES MYOPATHIES [FR/FR]; 13, place de Rungis, F-75013 Paris (FR). (72) Inventors; and (75) Inventors/Applicants (for US only): BECKMANN, Jacques [FR/FR]; 95, rue de Paris, F-94220 Charenton-le-Pont (FR). RICHARD, Isabelle [FR/FR]; 72, rue de l'Essonne, F-91000 Evry (FR). (74) Agents: GUTMANN, Ernest et al.; Ernest Gutmann - Yves Plasseraud S.A., 3, rue Chauveau-Lagarde, F-75008 Paris (FR).	(81) Designated States: CA, JP, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 10 October 1996 (10.10.96)	
(54) Title: LGMD GENE CODING FOR A CALCIUM DEPENDENT PROTEASE (57) Abstract <p>A nucleic acid sequence comprising: 1) the sequence represented in figure 8; or 2) the sequence represented in figure 2; or 3) a part of the sequence of figure 2 with the proviso that it is able to code for a protein having a calcium dependant protease activity involved in a LGMD2; or 4) a sequence derived from a sequence defined in 1), 2) or 3) by substitution, deletion or addition of one or more nucleotides with the proviso that said sequences still codes for said protease.</p>		

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 95/04575

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/57 C12N9/64 A61K38/48 G01N33/50 C12Q1/68
C12N5/10 A61K48/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N A61K G01N C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	CELL, APR 7 1995, 81 (1) P27-40, UNITED STATES, XP002010548 RICHARD I ET AL: "Mutations in the proteolytic enzyme calpain 3 cause limb-girdle muscular dystrophy type 2A." see the whole document	1-20
X	--- JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 264, no. 33, 1989, BALTIMORE, MD US, pages 20106-20111, XP002010549 HIROYUKI SORIMACHI ET AL.: "Molecular cloning of a novel mammalian calcium-dependent protease distinct form both m- and mu-types" cited in the application see figures 2,3 --- -/--	1-8, 12-15

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

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- *&* document member of the same patent family

Date of the actual completion of the international search

14 August 1996

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 268, no. 26, 1993, BALTIMORE, MD US, pages 19476-19482, XP002010550 HIROYUKI SORIMACHI ET AL.: "A novel tissue-specific calpain species expressed predominantly in the stomach comprises two alternative splicing products with and without Ca ²⁺ -binding domain" see figure 2 ---	1-8, 12-15
X	BIOCHEMISTRY, vol. 27, 1988, EASTON, PA US, pages 8122-8128, XP002010551 SHINOBU IMAJOH ET AL.: "Molecular cloning of the cDNA for the large subunit of the High-Ca ²⁺ -Requiring form of human Ca ²⁺ -activated neutral protease" cited in the application see figure 2 ---	1-8, 12-15
Y	HUMAN MOLECULAR GENETICS, vol. 3, no. 2, February 1994, pages 285-293, XP002010552 FOUGEROUSSE F. ET AL.: "Mapping of a chromosome 15 region involved in limb girdle muscular dystrophy" cited in the application see the whole document ---	1-20
Y	JOURNAL OF MEDICAL GENETICS, vol. 30, 1993, pages 385-387, XP000578358 PASSOS-BUENO M. R. ET AL.: "Evidence of genetic heterogeneity in the autosomal recessive adult forms of limb-girdle muscular dystrophy following linkage analysis with 15q probes in Brazilian families" see the whole document ---	1-20
Y	GENOMICS, OCT 1994, 23 (3) P619-27, UNITED STATES, XP000578720 RICHARD I ET AL: "Regional localization of human chromosome 15 loci." see page 625 ---	1-20
A	INT. J. BIOCHEM., vol. 22, no. 8, 1990, pages 811-822, XP002010554 JOHNSON P. ET AL.: "Calpains (intracellular calcium-activated cysteine proteinases): structure-activity relationships and involvement in normal and abnormal cellular metabolism" see the whole document ---	
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International Application No
PCT/EP 95/04575

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>FASEB JOURNAL, vol. 8, no. 11, 1994, pages 814-822, XP002010555 TAKAOMI C. SAIDO ET AL.: "Calpain: new perspectives in molecular diversity and physiological-pathological involvement" see the whole document -----</p>	



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